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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/365,081	07/30/1999	LEE D. BENGSTON	RIC-99-030	1345

25537 7590 08/12/2003

WORLDCOM, INC.
TECHNOLOGY LAW DEPARTMENT
1133 19TH STREET NW
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EXAMINER
SHAH, CHIRAG G

ART UNIT	PAPER NUMBER
2664	12

DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/365,081	Applicant(s) BENGSTON ET AL.	
	Examiner Chirag G Shah	Art Unit 2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/7/03* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 4-8, 11-13, 16 and 17 rejected under 35 U.S.C. 102(e) as being anticipated by Baniewicz (U.S. Patent No. 6,412,740).

Referring to claim 1 and 6, Baniewicz teaches a distributed restoration method and system for restoring communications traffic flow in response to sensing a failure within spans of the telecommunication network by mapping a topology of a spare capacity. Baniewicz teaches in figures 1 and 2 and respective portions of the specification of a DRA provisioned telecommunications network having a plurality of nodes interconnected with working and spare links. Baniewicz discloses in figures 7 and 8 and respective portions of the specification (column 7, lines 55 to column 9, lines 25) of outputting a message from each spare link of each

of the nodes to the adjacent node to which the spare link is connected. Baniewicz discloses in claims 7 and 8 and respective portions of the specification of identifying the port number of the node from where the spare link outputs the message and the port number of the adjacent node connected to the spare link where at the message is received. Baniewicz disclose in figure 19, column 12, lines 60 to column 13, lines 18 of storing as data the respective port of the nodes that have connected thereto at least one spare link via which the message is either sent or received, the identities of the nodes and the spare link interconnecting the nodes and generating from the stored data, the topology of spare links interconnecting the nodes of the network. Baniewicz further discloses in figure 12 and respective portions of the specification (column 10, lines 61 to column 11, lines 43) that when a failure occurs in the network, the step of transmitting from custodial nodes of the failed link a broadcast message takes place to downstream nodes to inform downstream nodes that it is a custodial node as claims. Furthermore, in column 9, lines 25-48, where it is clearly recites that once a failure occurs, failure notification starts the process by sending failure notification messages throughout the restoration subnetwork. Fault isolation entails determining which nodes are the custodial nodes, it is important to know the custodial nodes is that there are spares on the same span as the failed span. Thus, illustrating the step of outputting a message from each spare link of each of the nodes to the adjacent node (subnetwork) to which the spare link is connected, wherein at least two of the nodes are interconnected with plurality of spare links (spares) as claim. With respect to claim 6, in column 9, lines 60 to column 10, lines 60, it is shown that message is continuously transmitted (by alarm signal persisting for a period of time) and exchanged along spare links between adjacent nodes of the network (as illustrated before in column 9, lines 25-48) while a DRA process is not is

progress. Thus, an AIS signal is continuously transmitted and exchanged along spare links between adjacent nodes of the network as claims.

Referring to claims 4, 11, and 16, Baniewicz clearly discloses in figures 10 and 11 and respective portions of the specification that when a failure occurs in the network, further comprising the step of transmitting from a custodial nodes of the failed link a message, via a functional spare link, to downstream nodes thereof to inform downstream nodes that it is a custodial node as claims.

Referring to claim 5, 12, and 17 Baniewicz clearly illustrates in columns 5 and 6 of when how a custodial node of a failed link is selected to be an origin node and the origin node utilized the topology of the spare capacity of the network to find an alternate route for the disrupted traffic as claim.

Referring to claim 7, Baniewicz teaches of a distributed restoration method and system for restoring communications traffic flow in response to sensing a failure within spans of telecommunications network. Baniewicz teaches in column 7 and figure 7 and respective portions of specification of identifying return messages that is continuously transmitted and exchanged along spare links between adjacent nodes while a DRA process is not yet in progress as claim.

Referring to claim 8, Baniewicz teaches a distributed restoration method and system for restoring communications traffic flow in response to sensing a failure within spans of the telecommunication network by mapping a topology of a spare capacity. Baniewicz teaches in figures 1 and 2 and respective portions of the specification of a DRA provisioned telecommunications network having a plurality of nodes interconnected with working and spare

links. Baniewicz discloses in figures 7 and 8 and respective portions of the specification (column 7, lines 55 to column 9, lines 25) of outputting a message continuously (column 9, lines 60 to column 10, lines 60, where it is shown that message is continuously transmitted (by alarm signal persisting for a period of time) and exchanged along spare links between adjacent nodes of the network (as illustrated before in column 9, lines 25-48) to which the spare link is connected) from each spare link of each of the nodes to the adjacent node to which the spare link is connected. Baniewicz discloses in claims 7 and 8 and respective portions of the specification of identifying the port number of the node from where the spare link outputs the message and the port number of the adjacent node connected to the spare link where at the message is received. Baniewicz disclose in figure 19, column 12, lines 60 to column 13, lines 18 of storing as data the respective port of the nodes that have connected thereto at least one spare link via which the message is either sent or received, the identities of the nodes and the spare link interconnecting the nodes and generating from the stored data, the topology of spare links interconnecting the nodes of the network. Baniewicz further discloses in figure 12 and respective portions of the specification (column 10, lines 61 to column 11, lines 43) that when a failure occurs in the network, the step of transmitting from custodial nodes of the failed link a broadcast message takes place to downstream nodes to inform downstream nodes that it is a custodial node as claims.

Referring to claim 13, Baniewicz teaches a distributed restoration method and system for restoring communications traffic flow in response to sensing a failure within spans of the telecommunication network by mapping a topology of a spare capacity. Baniewicz teaches in figures 1 and 2 and respective portions of the specification of a DRA provisioned

telecommunications network having a plurality of nodes interconnected with working and spare links. Baniewicz discloses in figures 7 and 8 and respective portions of the specification (column 7, lines 55 to column 9, lines 25) of outputting a message from each spare link of each of the nodes to the adjacent node to which the spare link is connected. Baniewicz discloses in claims 7 and 8 and respective portions of the specification of identifying (each spare link prior to a failure in column 9, lines 25-48) the port number of the node from where the spare link outputs the message and the port number of the adjacent node connected to the spare link where at the message is received. Baniewicz disclose in figure 19, column 12, lines 60 to column 13, lines 18 of storing as data the respective port of the nodes that have connected thereto at least one spare link via which the message is either sent or received, the identities of the nodes and the spare link interconnecting the nodes and generating from the stored data, the topology of spare links interconnecting the nodes of the network. Baniewicz further discloses in figure 12 and respective portions of the specification (column 10, lines 61 to column 11, lines 43) that when a failure occurs in the network, the step of transmitting from custodial nodes of the failed link a broadcast message takes place to downstream nodes to inform downstream nodes that it is a custodial node as claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 3, 9, 10, 14, and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Baniewicz in view of Doshi (U.S. Patent No. 6,130,875).

Referring to claims 2, 3, 9, 10, 14, and 15 Baniewicz teaches of a distributed restoration method and system for restoring communications traffic flow in response to sensing a failure within spans of telecommunications network. Baniewicz discloses in column 4-7 and related sections of the specification of proving the generated topology of the spare links of the network to an origin node for beginning the restoration process if a failure occurs in the network. Baniewicz also discloses in figure 19 and respective portion of the specification where return messages contain information relating to the number of spare links available for connecting the origin node to the destination node, this process in done in iterations and updated continuously. Furthermore, the return message received is the ability to establish at the origin node a map of the restoration network showing where the spare capacity is useable for the restoration. Baniewicz fails to teach of storing data in a central processing means. Baniewicz also fails to teach of storing the updated status in a central processing means, wherein the central processing means uses the updated status to provide a real time topology of the spare capacity of the network. Doshi teaches of a hybrid centralized and distributed techniques for restoring communication in a network after a failure in a link, span or node of the network. Doshi teaches in columns 5 and 6 of utilizing the central processor or controller for downloading network connectivity information regarding interconnection between the network nodes in the absence of failures, capacities for at least a subset of the links in the network. Thus, other types of centrally computed information may also be downloaded to the nodes for use in a distributed algorithm.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the teaching of Baniewicz to include the teachings of Doshi in order to make more efficient use of spare capacity storage and provide a more efficient real-time discovery based approach for failure scenarios.

Response to Arguments

5. Applicant's arguments filed 7/7/03 have been fully considered but they are not persuasive.

Referring to claims 1, Applicant argues that, "...Baniewicz fails to disclose outputting a message form each spare link of each of the nodes to the adjacent node to which the spare link is connected, wherein at least two of the nodes are interconnected with a plurality of spare links as recited in Applicants' Claim 1. Examiner disagrees and directs applicant's attention to column 9, lines 25-48, where it is clearly recites that once a failure occurs, failure notification starts the process by sending failure notification messages throughout the restoration subnetwork. Fault isolation entails determining which nodes are the custodial nodes, it is important to know the custodial nodes is that there are spares on the same span as the failed span. Thus, illustrating the step of outputting a message from each spare link of each of the nodes to the adjacent node (subnetwork) to which the spare link is connected, wherein at least two of the nodes are interconnected with plurality of spare links (spares) as claim. Therefore, claim 1 stands rejected.

Referring to claim 6, Applicant argues specifically that, "...Baniewicz fails to disclose the element a fourth field for identifying the message to be a message that is continuously

transmitted and exchanged along spare links." Examiner disagrees and directs Applicant's attention to column 9, lines 60 to column 10, lines 60, where it is shown that message is continuously transmitted (by alarm signal persisting for a period of time) and exchanged along spare links between adjacent nodes of the network (as illustrated before in column 9, lines 25-48) while a DRA process is not is progress. Thus, an AIS signal is continuously transmitted and exchanged along spare links between adjacent nodes of the network as claim. Therefore, Claim 6 remains rejected.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 305-9051, (for formal communications; please mark "EXPEDITED PROCEDURE)

Or:

(703) 305-5403 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G Shah whose telephone number is 703-305-5639. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

cgs
August 6, 2003

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER
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